

THE ROLE OF CT SCAN IN FUNGAL RHINOSINUSITIS

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Objectives: Fungal rhinosinusitis is currently a diagnostic and therapeutic challenge. It is critical for early diagnosis before sinus operation. There is no clear consensus on the criteria to diagnose the fungal rhinosinusitis. It is relatively common and often has been misdiagnosed. Our study is to investigate the relationship between computed tomography features and fungal rhinosinusitis.

Methods: We prospectively and consecutively enrolled 193 patients. Their ages ranged from 8 to 82 years. Inclusion criteria are patients diagnosed with chronic rhinosinusitis who are going to receive endoscopic sinus surgery, with ability and willingness to complete the study. Patients were divided into three groups based on the computed tomography features. Group 1 consisted of patients with calcification spot in sinus computed tomography. Group 2 consisted of patients with white haziness in sinus computed tomography. Group 3 consisted of patients without calcification spot or white haziness in sinus computed tomography. Patient demographic data and clinical features were collected. Computed tomography was evaluated for calcification spot or white haziness sinus feature and Lund Mackay score. The diseased tissue was sent for pathology study, fungal culture, bacterial culture and aspergillus antigen culture.

Results: There was no significant difference observed among group 1, group 2 and group 3 considering age, sex, diabetes mellitus, phadiotop aeroallergen multiscreen test, and positive for fungus or bacterial culture results. There was significant difference among group 1, group 2 and group 3 considering mean Lund score, positive for operative fungal ball and fungal paste findings, fungus pathology results, and aspergillus antigen culture.

Conclusion: Fungal rhinosinusitis is mostly triggered by an interaction of environment, immune system and sinus anatomic condition. Pre-operative survey of sinus computed tomography is important for the diagnosis of fungal rhinosinusitis. Operative findings of fungus ball and fungus paste, fungus pathology results, aspergillus antigen culture could give the diagnosis of fungal rhinosinusitis.